Translation

PATENT COOPERATION TREATY

PCT/EP2003/011853

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference R 1610 WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP2003/011853	International filing date (*day/month/year*) 24 October 2003 (24.10.2003)	Priority date (*day/month/year*) 25 October 2002 (25.10.2002)
International Patent Classification (IPC) or national classification and IPC F04C 18/12		
Applicant RIETSCHLE THOMAS SCHOPFHEIM GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
23 April 2004 (23.04.2004)	28 December 2004 (28.12.2004)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP2003/011853

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☒ the description:

pages 3-5, as originally filed

pages _____, filed with the demand

pages 1, 1a, 2, 2a, filed with the letter of 22 November 2004 (22.11.2004)

☒ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19

pages _____, filed with the demand

pages 1-7, filed with the letter of 22 November 2004 (22.11.2004)

☒ the drawings:

pages 1/4-4/4, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

** Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

*** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP 03/11853

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-7	YES
	Claims		NO
Inventive step (IS)	Claims	1-7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-7	YES
	Claims		NO

2. Citations and explanations

US2635552 A (D1), which is considered to represent the prior art closest to the subject matter of claim 1, discloses a pump with two counter-rotating rotors mounted on two parallel, mutually spaced shafts supported in a housing. The housing has two radial walls formed as a single piece with a peripheral wall in which the shafts are supported and two lateral walls with an opening closed by a detachable cover, wherein a gear chamber is delimited between the radial walls.

The subject matter of claim 1 thus differs from D1 in that the housing delimits a working chamber on the other side of the partition which receives the rotors, said chamber being closed by a radial housing cover, and that the housing forms a monobloc base body which has an opening on its front end facing the housing cover whose width exceeds that of all the axial passages and bores in the interior of the housing, in consequence of which said passages and bores are accessible for the purpose of machining through this opening in a set-up of the base body, while the partition has axially penetrating openings whose width exceeds that of the axial bearing bores in the radial outer wall to receive the shaft bearings.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention is that of providing a compressor machine that ensures accurate alignment of the shafts despite simplified manufacture and a reduced number of components.

The solution proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)). The reasons are:

Although US 1386792 (D2) describes an approximately monobloc housing for an air pump of similar construction, neither D1 nor D2 suggests producing such a housing for the same purpose as in the present application. Combining the features of the units according to D1 and D2 in order to solve the problem of interest would not be obvious to a person skilled in the art.

Claims 2-7 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and independent step.